

What is claimed:

1. Isolated nucleic acid having at least 80% nucleic acid sequence identity to:

5 (a) a nucleotide sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4), Figure 6 (SEQ ID NO:6), Figure 8 (SEQ ID NO:8), Figure 10 (SEQ ID NO:10), Figure 12 (SEQ ID NO:12), Figure 14 (SEQ ID NO:14), Figure 16 (SEQ ID NO:16), Figure 18 (SEQ ID NO:18), Figure 20 (SEQ ID NO:20), Figure 22 (SEQ ID NO:22), Figure 24 (SEQ ID NO:24), Figure 26 (SEQ ID NO:26), Figure 28 (SEQ ID NO:28), Figure 30 (SEQ ID NO:30), Figure 32 (SEQ ID NO:32), Figure 34 (SEQ ID NO:34), Figure 36 (SEQ ID NO:36), Figure 38 (SEQ ID NO:38), Figure 40 (SEQ ID NO:40), Figure 42 (SEQ ID NO:42), Figure 44 (SEQ ID NO:44), Figure 46 (SEQ ID NO:46), Figure 48 (SEQ ID NO:48), Figure 50 (SEQ ID NO:50), Figure 52 (SEQ ID NO:52), Figure 54 (SEQ ID NO:54), Figure 56 (SEQ ID NO:56), Figure 58 (SEQ ID NO:58), Figure 60 (SEQ ID NO:60), Figure 62 (SEQ ID NO:62), Figure 64 (SEQ ID NO:64), Figure 66 (SEQ ID NO:66), Figure 68 (SEQ ID NO:68), Figure 70 (SEQ ID NO:70), Figure 72 (SEQ ID NO:72), Figure 74 (SEQ ID NO:74), Figure 76 (SEQ ID NO:76), Figure 78 (SEQ ID NO:78), Figure 80 (SEQ ID NO:80), Figure 82 (SEQ ID NO:82), Figure 84 (SEQ ID NO:84), Figure 86 (SEQ ID NO:86), Figure 88 (SEQ ID NO:88), Figure 90 (SEQ ID NO:90), Figure 92 (SEQ ID NO:92), Figure 94 (SEQ ID NO:94), Figure 96 (SEQ ID NO:96), Figure 98 (SEQ ID NO:98), Figure 100 (SEQ ID NO:100), Figure 102 (SEQ ID NO:102) or Figure 104 (SEQ ID NO:104).

20 2. Isolated nucleic acid having at least 80% nucleic acid sequence identity to a nucleotide sequence selected from the group consisting of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3), Figure 5 (SEQ ID NO:5), Figure 7 (SEQ ID NO:7), Figure 9 (SEQ ID NO:9), Figure 11 (SEQ ID NO:11), Figure 13 (SEQ ID NO:13), Figure 15A-B (SEQ ID NO:15), Figure 17 (SEQ ID NO:17), Figure 19 (SEQ ID NO:19), Figure 21 (SEQ ID NO:21), Figure 23 (SEQ ID NO:23), Figure 25 (SEQ ID NO:25), Figure 27 (SEQ ID NO:27), Figure 29 (SEQ ID NO:29), Figure 31 (SEQ ID NO:31), Figure 33 (SEQ ID NO:33), Figure 35 (SEQ ID NO:35), Figure 37 (SEQ ID NO:37), Figure 39 (SEQ ID NO:39), Figure 41 (SEQ ID NO:41), Figure 43 (SEQ ID NO:43), Figure 45 (SEQ ID NO:45), Figure 47 (SEQ ID NO:47), Figure 49 (SEQ ID NO:49), Figure 51 (SEQ ID NO:51), Figure 53 (SEQ ID NO:53), Figure 55 (SEQ ID NO:55), Figure 57 (SEQ ID NO:57), Figure 59 (SEQ ID NO:59), Figure 61 (SEQ ID NO:61), Figure 63 (SEQ ID NO:63), Figure 65 (SEQ ID NO:65), Figure 67 (SEQ ID NO:67), Figure 69 (SEQ ID NO:69), Figure 71 (SEQ ID NO:71), Figure 73 (SEQ ID NO:73), Figure 75 (SEQ ID NO:75), Figure 77 (SEQ ID NO:77), Figure 79 (SEQ ID NO:79), Figure 81 (SEQ ID NO:81), Figure 83 (SEQ ID NO:83), Figure 85 (SEQ ID NO:85), Figure 87 (SEQ ID NO:87), Figure 89 (SEQ ID NO:89), Figure 91 (SEQ ID NO:91), Figure 93 (SEQ ID NO:93), Figure 95 (SEQ ID NO:95), Figure 97 (SEQ ID NO:97), Figure 99 (SEQ ID NO:99), Figure 101 (SEQ ID NO:101) and Figure 103 (SEQ ID NO:103).

30 3. Isolated nucleic acid having at least 80% nucleic acid sequence identity to a nucleotide sequence selected from the group consisting of the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3), Figure 5 (SEQ ID NO:5), Figure 7 (SEQ ID NO:7)

NO:7), Figure 9 (SEQ ID NO:9), Figure 11 (SEQ ID NO:11), Figure 13 (SEQ ID NO:13), Figure 15A-B (SEQ ID NO:15), Figure 17 (SEQ ID NO:17), Figure 19 (SEQ ID NO:19), Figure 21 (SEQ ID NO:21), Figure 23 (SEQ ID NO:23), Figure 25 (SEQ ID NO:25), Figure 27 (SEQ ID NO:27), Figure 29 (SEQ ID NO:29), Figure 31 (SEQ ID NO:31), Figure 33 (SEQ ID NO:33), Figure 35 (SEQ ID NO:35), Figure 37 (SEQ ID NO:37), Figure 39 (SEQ ID NO:39), Figure 41 (SEQ ID NO:41), Figure 43 (SEQ ID NO:43), Figure 45 (SEQ ID NO:45), Figure 47 (SEQ ID NO:47), Figure 49 (SEQ ID NO:49), Figure 51 (SEQ ID NO:51), Figure 53 (SEQ ID NO:53), Figure 55 (SEQ ID NO:55), Figure 57 (SEQ ID NO:57), Figure 59 (SEQ ID NO:59), Figure 61 (SEQ ID NO:61), Figure 63 (SEQ ID NO:63), Figure 65 (SEQ ID NO:65), Figure 67 (SEQ ID NO:67), Figure 69 (SEQ ID NO:69), Figure 71 (SEQ ID NO:71), Figure 73 (SEQ ID NO:73), Figure 75 (SEQ ID NO:75), Figure 77 (SEQ ID NO:77), Figure 79 (SEQ ID NO:79), Figure 81 (SEQ ID NO:81), Figure 83 (SEQ ID NO:83), Figure 85 (SEQ ID NO:85), Figure 87 (SEQ ID NO:87), Figure 89 (SEQ ID NO:89), Figure 91 (SEQ ID NO:91), Figure 93 (SEQ ID NO:93), Figure 95 (SEQ ID NO:95), Figure 97 (SEQ ID NO:97), Figure 99 (SEQ ID NO:99), Figure 101 (SEQ ID NO:101), and Figure 103 (SEQ ID NO:103).

5. A vector comprising the nucleic acid of Claim 1.

6. The vector of Claim 5 operably linked to control sequences recognized by a host cell transformed with the vector.

7. A host cell comprising the vector of Claim 5.

8. The host cell of Claim 7, wherein said cell is a CHO cell, an *E.coli* cell or a yeast cell.

9. A process for producing a PRO polypeptide comprising culturing the host cell of Claim 7 under conditions suitable for expression of said PRO polypeptide and recovering said PRO polypeptide from the cell culture.

10. An isolated polypeptide having at least 80% amino acid sequence identity to:

(a) an amino acid sequence of the polypeptide shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4), Figure 6 (SEQ ID NO:6), Figure 8 (SEQ ID NO:8), Figure 10 (SEQ ID NO:10), Figure 12 (SEQ ID NO:12), Figure 14 (SEQ ID NO:14), Figure 16 (SEQ ID NO:16), Figure 18 (SEQ ID NO:18), Figure 20 (SEQ ID NO:20), Figure 22 (SEQ ID NO:22), Figure 24 (SEQ ID NO:24), Figure 26 (SEQ ID NO:26), Figure 28 (SEQ ID NO:28), Figure 30 (SEQ ID NO:30), Figure 32 (SEQ ID NO:32), Figure 34 (SEQ ID NO:34), Figure 36 (SEQ ID NO:36), Figure 38 (SEQ ID NO:38), Figure 40 (SEQ ID NO:40), Figure 42 (SEQ ID NO:42), Figure 44 (SEQ ID NO:44), Figure 46 (SEQ ID NO:46), Figure 48 (SEQ ID NO:48), Figure 50 (SEQ ID NO:50), Figure 52 (SEQ ID NO:52), Figure 54 (SEQ ID NO:54), Figure 56 (SEQ ID NO:56), Figure 58 (SEQ ID NO:58), Figure 60 (SEQ ID NO:60), Figure 62 (SEQ ID NO:62), Figure 64 (SEQ ID NO:64), Figure 66 (SEQ ID NO:66), Figure 68 (SEQ ID NO:68), Figure 70 (SEQ ID NO:70), Figure 72 (SEQ ID NO:72), Figure 74 (SEQ ID NO:74), Figure 76 (SEQ ID NO:76), Figure 78

(SEQ ID NO:78), Figure 80 (SEQ ID NO:80), Figure 82 (SEQ ID NO:82), Figure 84 (SEQ ID NO:84), Figure 86 (SEQ ID NO:86), Figure 88 (SEQ ID NO:88), Figure 90 (SEQ ID NO:90), Figure 92 (SEQ ID NO:92), Figure 94 (SEQ ID NO:94), Figure 96 (SEQ ID NO:96), Figure 98 (SEQ ID NO:98), Figure 100 (SEQ ID NO:100), Figure 102 (SEQ ID NO:102), or Figure 104 (SEQ ID NO:104).

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12. A chimeric molecule comprising a polypeptide according to Claim 10 fused to a heterologous amino acid sequence.

13. The chimeric molecule of Claim 12, wherein said heterologous amino acid sequence is an epitope tag sequence or an Fc region of an immunoglobulin.

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14. An antibody which specifically binds to a polypeptide according to Claim 10.

15. The antibody of Claim 14, wherein said antibody is a monoclonal antibody, a humanized antibody or a single-chain antibody.

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16. A composition of matter comprising (a) a polypeptide of Claim 10, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide, in combination with a carrier.

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17. The composition of matter of Claim 16, wherein said carrier is a pharmaceutically acceptable carrier.

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18. The composition of matter of Claim 16 comprising a therapeutically effective amount of (a), (b), (c) or (d).

19. An article of manufacture, comprising:

a container;

a label on said container; and

a composition of matter comprising (a) a polypeptide of Claim 10, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide, contained within said container, wherein label on said container indicates that said composition of matter can be used for treating an immune related disease.

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20. A method of treating an immune related disorder in a mammal in need thereof comprising administering to said mammal a therapeutically effective amount of (a) a polypeptide of Claim 10, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide.

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21. The method of Claim 20, wherein the immune related disorder is systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, a spondyloarthropathy, systemic sclerosis, an idiopathic inflammatory myopathy, Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia, autoimmune thrombocytopenia, thyroiditis, diabetes mellitus, immune-mediated renal disease, a demyelinating disease of the central or peripheral nervous system, idiopathic demyelinating polyneuropathy, Guillain-Barré syndrome, a chronic inflammatory demyelinating polyneuropathy, a hepatobiliary disease, infectious or autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, sclerosing cholangitis, inflammatory bowel disease, gluten-sensitive enteropathy, Whipple's disease, an autoimmune or immune-mediated skin disease, a bullous skin disease, erythema multiforme, contact dermatitis, psoriasis, an allergic disease, asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity, urticaria, an immunologic disease of the lung, eosinophilic pneumonias, idiopathic pulmonary fibrosis, hypersensitivity pneumonitis, a transplantation associated disease, graft rejection or graft-versus-host-disease.

22. A method for determining the presence of a PRO polypeptide in a sample suspected of containing said polypeptide, said method comprising exposing said sample to an anti-PRO83478 anti-PRO69889, anti-PRO37073, anti-PRO4984, anti-PRO71039, anti-PRO71191, anti-PRO271, anti-PRO71042, anti-PRO71242, anti-PRO6015, anti-PRO34336, anti-PRO71043, anti-PRO71044, anti-PRO71045, anti-PRO71046, anti-PRO83479, anti-PRO535, anti-PRO4426, anti-PRO34447, anti-PRO2023, anti-PRO25349, anti-PRO1265, anti-PRO34298, anti-PRO738, anti-PRO71049, anti-PRO21341, anti-PRO1125, anti-PRO4369, anti-PRO177, anti-PRO83480, anti-PRO71052, anti-PRO37125, anti-PRO83481, anti-PRO71054, anti-PRO69462, anti-PRO268, anti-PRO615, anti-PRO25402, anti-PRO71055, anti-PRO71056, anti-PRO34332, anti-PRO71057, anti-PRO71058, anti-PRO83482, anti-PRO34454, anti-PRO6243, anti-PRO1864, anti-PRO71060, anti-PRO71061, anti-PRO793, anti-PRO83483 or anti-PRO60929 antibody and determining binding of said antibody to a component of said sample.

23. A method of diagnosing an immune related disease in a mammal, said method comprising detecting the level of expression of a gene encoding PRO83478, PRO69889, PRO37073, PRO4984, PRO71039, PRO71191, PRO271, PRO71042, PRO71242, PRO6015, PRO34336, PRO71043, PRO71044, PRO71045, PRO71046, PRO83479, PRO535, PRO4426, PRO34447, PRO2023, PRO25349, PRO1265, PRO34298, PRO738, PRO71049, PRO21341, PRO1125, PRO4369, PRO177, PRO83480, PRO71052, PRO37125, PRO83481, PRO71054, PRO69462, PRO268, PRO615, PRO25402, PRO71055, PRO71056, PRO34332, PRO71057, PRO71058, PRO83482, PRO34454, PRO6243, PRO1864, PRO71060, PRO71061, PRO793, PRO83483, or PRO60929 polypeptide (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower level of expression of said gene in the test sample as compared to the control sample is indicative of the presence of an immune related disease in the mammal from which the test tissue cells were obtained.

24. A method of diagnosing an immune related disease in a mammal, said method comprising (a) contacting an anti-PRO83478 anti-PRO69889, anti-PRO37073, anti-PRO4984, anti-PRO71039, anti-

PRO71191, anti-PRO271, anti-PRO71042, anti-PRO71242, anti-PRO6015, anti-PRO34336, anti-PRO71043, anti-PRO71044, anti-PRO71045, anti-PRO71046, anti-PRO83479, anti-PRO535, anti-PRO4426, anti-PRO34447, anti-PRO2023, anti-PRO25349, anti-PRO1265, anti-PRO34298, anti-PRO738, anti-PRO71049, anti-PRO21341, anti-PRO1125, anti-PRO4369, anti-PRO177, anti-PRO83480, anti-PRO71052, anti-PRO37125, anti-PRO83481, anti-PRO71054, anti-PRO69462, anti-PRO268, anti-PRO615, anti-PRO25402, anti-PRO71055, anti-PRO71056, anti-PRO34332, anti-PRO71057, anti-PRO71058, anti-PRO83482, anti-PRO34454, anti-PRO6243, anti-PRO1864, anti-PRO71060, anti-PRO71061, anti-PRO793, anti-PRO83483 or anti-PRO60929 antibody with a test sample of tissue cells obtained from said mammal and (b) detecting the formation of a complex between the antibody and the polypeptide in the test sample, wherein formation of said complex is indicative of the presence of an immune related disease in the mammal from which the test tissue cells were obtained.

25. A method of identifying a compound that inhibits the activity of PRO83478, PRO69889, PRO37073, PRO4984, PRO71039, PRO71191, PRO271, PRO71042, PRO71242, PRO6015, PRO34336, PRO71043, PRO71044, PRO71045, PRO71046, PRO83479, PRO535, PRO4426, PRO34447, PRO2023, PRO25349, PRO1265, PRO34298, PRO738, PRO71049, PRO21341, PRO1125, PRO4369, PRO177, PRO83480, PRO71052, PRO37125, PRO83481, PRO71054, PRO69462, PRO268, PRO615, PRO25402, PRO71055, PRO71056, PRO34332, PRO71057, PRO71058, PRO83482, PRO34454, PRO6243, PRO1864, PRO71060, PRO71061, PRO793, PRO83483, or PRO60929 polypeptide, said method comprising contacting cells which normally respond to said polypeptide with (a) said polypeptide and (b) a candidate compound, and determining the lack responsiveness by said cell to (a).

26. A method of identifying a compound that inhibits the expression of a gene encoding a PRO83478, PRO69889, PRO37073, PRO4984, PRO71039, PRO71191, PRO271, PRO71042, PRO71242, PRO6015, PRO34336, PRO71043, PRO71044, PRO71045, PRO71046, PRO83479, PRO535, PRO4426, PRO34447, PRO2023, PRO25349, PRO1265, PRO34298, PRO738, PRO71049, PRO21341, PRO1125, PRO4369, PRO177, PRO83480, PRO71052, PRO37125, PRO83481, PRO71054, PRO69462, PRO268, PRO615, PRO25402, PRO71055, PRO71056, PRO34332, PRO71057, PRO71058, PRO83482, PRO34454, PRO6243, PRO1864, PRO71060, PRO71061, PRO793, PRO83483, or PRO60929 polypeptide, said method comprising contacting cells which normally express said polypeptide with a candidate compound, and determining the lack of expression said gene.

27. The method of Claim 26, wherein said candidate compound is an antisense nucleic acid.

28. A method of identifying a compound that mimics the activity of a PRO83478, PRO69889, PRO37073, PRO4984, PRO71039, PRO71191, PRO271, PRO71042, PRO71242, PRO6015, PRO34336, PRO71043, PRO71044, PRO71045, PRO71046, PRO83479, PRO535, PRO4426, PRO34447, PRO2023, PRO25349, PRO1265, PRO34298, PRO738, PRO71049, PRO21341, PRO1125, PRO4369, PRO177, PRO83480, PRO71052, PRO37125, PRO83481, PRO71054, PRO69462, PRO268, PRO615, PRO25402, PRO71055, PRO71056, PRO34332, PRO71057, PRO71058, PRO83482, PRO34454, PRO6243, PRO1864,

PRO71060, PRO71061, PRO793, PRO83483, or PRO60929 polypeptide, said method comprising contacting cells which normally respond to said polypeptide with a candidate compound, and determining the responsiveness by said cell to said candidate compound.

5           31.     A method of stimulating the immune response in a mammal, said method comprising administering to said mammal an effective amount of a PRO83478, PRO69889, PRO37073, PRO4984, PRO71039, PRO71191, PRO271, PRO71042, PRO71242, PRO6015, PRO34336, PRO71043, PRO71044, PRO71045, PRO71046, PRO83479, PRO535, PRO4426, PRO34447, PRO2023, PRO25349, PRO1265, PRO34298, PRO738, PRO71049, PRO21341, PRO1125, PRO4369, PRO177, PRO83480, PRO71052, 10 PRO37125, PRO83481, PRO71054, PRO69462, PRO268, PRO615, PRO25402, PRO71055, PRO71056, PRO34332, PRO71057, PRO71058, PRO83482, PRO34454, PRO6243, PRO1864, PRO71060, PRO71061, PRO793, PRO83483, or PRO60929 polypeptide antagonist, wherein said immune response is stimulated.

          32.     A method of diagnosing an inflammatory immune response in a mammal, said method 15 comprising detecting the level of expression of a gene encoding PRO83478, PRO69889, PRO37073, PRO4984, PRO71039, PRO71191, PRO271, PRO71042, PRO71242, PRO6015, PRO34336, PRO71043, PRO71044, PRO71045, PRO71046, PRO83479, PRO535, PRO4426, PRO34447, PRO2023, PRO25349, PRO1265, PRO34298, PRO738, PRO71049, PRO21341, PRO1125, PRO4369, PRO177, PRO83480, PRO71052, PRO37125, PRO83481, PRO71054, PRO69462, PRO268, PRO615, PRO25402, PRO71055, 20 PRO71056, PRO34332, PRO71057, PRO71058, PRO83482, PRO34454, PRO6243, PRO1864, PRO71060, PRO71061, PRO793, PRO83483, or PRO60929 polypeptide (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower level of expression of said gene in the test sample as compared to the control sample is indicative of the presence of an inflammatory immune response in the mammal from which the test tissue 25 cells were obtained.